

Application No.: 10/815,346

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Docket No.: 070702009700

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently amended) A microfluidic device comprising:

a body comprising a first fluid passage; a second fluid passage; a membrane positioned separating the first fluid passage from the second fluid passage and in communication with the first fluid passage and the second fluid passage;

a first electrode positioned in the first fluid passage; and

a second electrode positioned in the second fluid passage;

wherein a potential applied to the first and second electrodes passes electrons from the first fluid passage to the second fluid passage through the membrane,

further wherein the first fluid passage intersects the second fluid passage where the membrane is positioned separating the first fluid passage and the second fluid passage,

wherein the first fluid passage includes one or more first reservoirs and the first electrode is positioned in one of the first reservoirs, and

wherein the first fluid passage, the membrane and the second fluid passage form a 3-level structure with the first passage and the second passage separated by the membrane.

2. (Original) The device of claim 1, wherein the body is polymethylsiloxane material (PDMS).

3. (Original) The device of claim 1, wherein the membrane is a gel made of agarose.

4. (Original) The device of claim 1, wherein the membrane is a semipermeable membrane made of regenerated cellulose.

5. (Canceled)

6. (Currently amended) The device of claim 1, wherein the second fluid passage includes one or more second reservoirs and the second electrode is positioned in one of the second reservoirs.

7-24. (Canceled)

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